# C-130H Hercules #439 11/18/15

**Aircraft:**
C-130H Hercules #439 (See full schedule)
**Flight Number:**
NAAMES Nov-2015 Data Flight #4
**Payload Configuration:**
NAAMES
**Nav Data Collected:**
No
**Total Flight Time:**
9.8 hours
**Submitted by:**
Cate Easmunt on 11/18/15
**Flight Segments:**

| | | | |
|---|---|---|---|
| **From:** | CYYT | **To:** | CYYT |
| **Start:** | 11/18/15 11:00 Z | **Finish:** | 11/18/15 20:47 Z |
| **Flight Time:** | 9.8 hours | | |
| **Log Number:** | 161006 | **PI:** | Michael Behrenfeld |
| **Funding Source:** | Paula Bontempi - NASA - SMD - ESD Ocean Biology and Biogeochemistry | | |
| **Purpose of Flight:** | Science | | |

**Flight Hour Summary:**

| | **161006** |
|---|---|
| **Flight Hours Approved in SOFRS** | 100 |
| **Total Used** | 64.5 |
| **Total Remaining** | 35.5 |

**161006 Flight Reports**

| Date | Flt # | Purpose of Flight | Duration | Running Total | Hours Remaining |
|---|---|---|---|---|---|
| 10/31/15 | Airworthiness Test Flight | Check | 1 | 1 | 99 |
| 11/04/15 | Project Test Flight | Check | 5.5 | 6.5 | 93.5 |
| 11/09/15 - 11/10/15 | NAAMES Nov-2015 Transit to St.. John's | Transit | 4.6 | 11.1 | 88.9 |
| 11/12/15 | NAAMES Nov-2015 Data Flight #1 | Science | 9.9 | 21 | 79 |
| 11/14/15 | NAAMES Nov-2015 Data Flight #2 | Science | 9.7 | 30.7 | 69.3 |
| 11/17/15 | NAAMES Nov-2015 Data Flight #3 | Science | 8.8 | 39.5 | 60.5 |
| 11/18/15 | NAAMES Nov-2015 Data Flight #4 | Science | 9.8 | 49.3 | 50.7 |
| 11/23/15 | NAAMES Nov-2015 Data Flight #5 | Science | 9.4 | 58.7 | 41.3 |
| 11/28/15 | NAAMES Nov-2015 Return Transit | Transit | 5.3 | 64 | 36 |
| 11/28/15 | NAAMES Nov-2015 Return Transit | Transit | 0.5 | 64.5 | 35.5 |

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

**Related Science Report:**

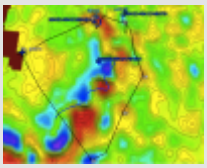
## NAAMES - C-130H Hercules #439 11/18/15 Science Report

**Mission:**
NAAMES
**Mission Summary:**

The fourth NAAMES science flight complements yesterday?s southern survey by heading north to finally capture ocean remote sensing around Points S1 and S3 before heading south again to execute bowtie and cloud module maneuvers in the vicinity of the ship at Point S4. The ECMWF cloud forecast suggested that the entire northern end of the track would have relatively low cloud fraction today, which actually ended up being scattered-to-broken clouds throughout much of the region. Because of large overcast cloud features stretching from Points S1 to S2 the decision was made to deviate south from the flight plan by skipping Point S2 and working the more open cloud field just north of S1 and S3 at high-altitude with the ocean remote sensors. Although, the overcast skies over Point S2 eventually opened up later in the flight, the new flight leg nicely extended the coverage of the ocean remote sensing tracks in the vicinity of Points S1, S2, and S3. The C-130 carried out the northern leg of the bowtie near the current ship station in the eddy at Point S4, where it encountered open skies to the west and east of the leg and broken stratocumulus clouds in the middle of the bowtie leg. The aircraft then proceeded to carry out extensive low-level sampling in and around the ship as well as for a southern bowtie leg, before starting a cloud module to the southwest of the ship. The clouds in the area around Point S4 were observed to be layered and evolving rapidly with heavy drizzle, which complicated the cloud module legs. The pilots and science crew did an outstanding job of carrying out level cloud module legs while avoiding clear air aerosols impacted by drizzle. These efforts are evident in the meandering nature of the flight track as shown in the maps below. After completing the cloud module, the C-130 finished the high-altitude leg of the southern bowtie module before returning to base.

**Images:**

## Flight Track Overlaid on Eddy Map



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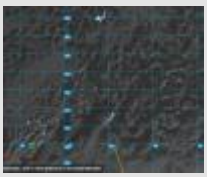
## 1250Z GOES Visible Imagery and Flight Track



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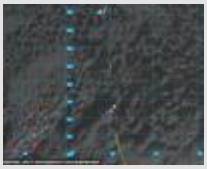
## 1310Z GOES Visible Imagery and Flight Track



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## 1325Z GOES Visible Imagery and Flight Track

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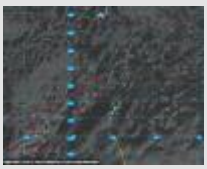
## 1335Z GOES Visible Imagery and Flight Track



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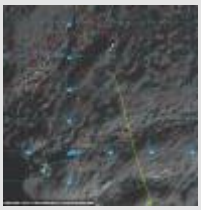
## 1340Z GOES Visible Imagery and Flight Track



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## 1410Z GOES Visible Imagery and Flight Track

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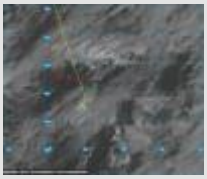
## 1440Z GOES Visible Imagery and Flight Track



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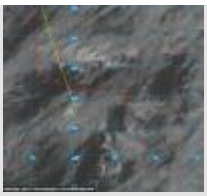
## 1500Z GOES Visible Imagery and Flight Track



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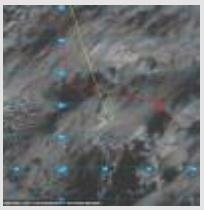
## 1515Z GOES Visible Imagery and Flight Track



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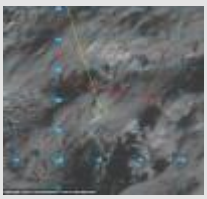
## 1530Z GOES Visible Imagery and Flight Track



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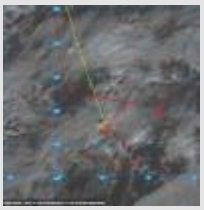
## 1620Z GOES Visible Imagery and Flight Track



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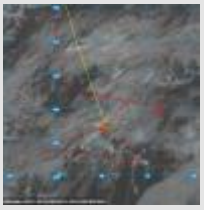
## 1645Z GOES Visible Imagery and Flight Track



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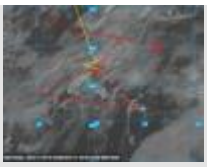
## 1650Z GOES Visible Imagery and Flight Track



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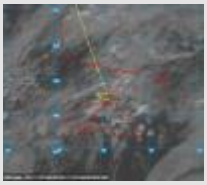
## 1710Z GOES Visible Imagery and Flight Track



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## 1745Z GOES Visible Imagery and Flight Track

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## 1755Z GOES Visible Imagery and Flight Track

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## 1840Z GOES Visible Imagery and Flight Track

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**Submitted by:**
Richard Moore on 11/23/15

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